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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,081	12/14/2004	Peter Dam Nielsen	893-011876-US (PAR)	2106

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FAIRFIELD, CT 06824

EXAMINER
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LAM, DUNG LE

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/502,081	Applicant(s) NIELSEN, PETER DAM	
	Examiner Dung Lam	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13, 14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13, 14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/8/06 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4 and 13 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1, 4 and 13 cite, "said connector pins operating in an identification state is a **bi-directional and bimode**". The specification does not clearly define the above underlined limitation and neither does the Remarks identify where the added limitations are supported in the specification. For examination purpose, the examiner will interpret "bi-directional" as a signal/energy flowing in and out

Art Unit: 2617

of the cover and the "bi-mode" is interpreted as some operations that can be done two ways.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1-10, 13, 15- 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Andrews** (US Patent No. 5,911,121) in view of **White et al.** (US Publication No. 2005/0026643) in further view of **Gum** (US Patent No. 6,477,390).

3. Regarding **claim 1**, **Andrews** teaches a method of operating an electric circuitry (C3 L23-40, C5 L14-30) interfacing with an exchangeable cover part (44, Fig. 2) for supporting a user interface of a wireless terminal (10, Fig. 2), said wireless communication terminal and said user exchangeable cover part are electrically interconnected by means of an electrical connector (60, Fig. 3) having a plurality of pins (C1, C2, C3, Fig. 4), said method comprises: identifying a type of said user exchangeable cover part and (Col. 3, line 34-39); user exchangeable cover part and (Col. 3, line 34-39); operating at least one of said connector pins in an identification state for sensing a value included in an identification cover type indicator (Col. 3, line

34-39); and afterwards operating at least one of the connector pins in an operation state for operating the electric circuitry of said user exchangeable cover part (Col. 3, line 41 - Col. 4, line 22, Table 1).

However **Andrews** does not explicitly teach that (a) the electric circuitry is in the cover and that (b) the at least one of said connector pins operating in an identification state is a bi-directional and bi-mode signal pin bi-directional and bi-mode signal pin.

(a) In an analogous art, White teaches an electronic circuit that is embedded in the cover of the phone (17, Fig. 1, [0039, 0047]). Therefore, it would have been obvious for one skill in the art at the time of the invention to modify Andrews's teaching of the removable cover and the pin connection to also have the circuitry within the cover to make it easier and less expensive for future upgrade of functionality buy simply changing the cover that has the embedded additional function and not having to buy a brand new phone.

White further teaches that it is possible to connect the cover and the body by ohmic coupling ([0099]), though as his design choice, White prefers inductive coupling over ohmic coupling arrangement. The examiner notes the pin is nothing more than an interface that connects the cover and the main body of the phone. Thus, White clearly teaches that the interface can be a contact (ohmic/pins) or contactless (inductive coupling); it's a matter of design choice.

(b) White further teaches that the interface allows signal to travel **from** the cover to the body of mobile phone and vice versa ([0013-0014]) or power is coming into the cover from the reader unit of the mobile's body ([0047]) and the identity of the cover is

Art Unit: 2617

going **out** of the cover to the mobile ([0062]) which broadly reads on the concept of having an interface that is bidirectional. Therefore, it would have been obvious for one skill in the art at the time of the invention to further modify Andrews teaching to not only having data going in but also out to transfer data to fully utilize the interface. And because the data storage can either operate synchronous mode or asynchronous mode it broadly reads on as being bi-mode ([0067]). Therefore, it would have been obvious for one skill in the art at the time of the invention to further modify Andrews teaching to have bi-mode to increase the flexibility.

However, Andrews and White do not explicitly teach a user-defined mapping of a set of tones or sound effects to the one of more keys connected to said electric circuitry of said user exchangeable cover. In an analogous art, **Gum** teaches a user-defined mapping of a set of audio tones to one or more keys (Col. 2 L9-14, Col. 4-6 especially C6 In 30-65, Figs. 1, 3-4). Therefore, it would have been obvious for one skill in the art at the time of the invention to combine Andrew's exchangeable cover and Gum's teaching of a user-defined mapping of enunciating certain audio tones to the keys to provide a user-friendly feature in reassuring users in dark environment or sight-impaired users that the correct buttons were pressed (Col. 1 L35-49).

White further teaches that said keys are connected to said electric circuitry (controller, Fig. 13, para. 08, 10, 47, 60, 62, 66) and wherein said keys are configured to create sound creating purposes comprising music composing applications, sound creating applications (create tunes para. 88), system sound creation (sound generation system, para. 134), sending sounds with multimedia messaging service (par. 87) or any

Art Unit: 2617

combination thereof. **White** further teaches that the supplier of the fascia may attract buyers by providing additional data such as ringing tones to advertise itself or other companies (para. 60). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention to combine Andrews's user exchangeable cover and Gum's user-defined mapping of the keys to the tone and **White**'s keys for sound creating applications or tune creation features to make the fascia more interesting and thus more marketable.

4. Regarding **claim 2**, Andrews, White and Gum teach all the limitations as in claim

1. Andrew further teaches said value is a resistor value included in the cover type indicator (Col. 3, line 54 - Col. 4, line 10).

5. Regarding **claim 3**, Andrews, White and Gum teach all the limitations as in claim

2. White further teaches an operation state is a frequency mode for directing an electrical representation of a ringing signal to the electric circuitry for providing an illumination effect following the ringing signal (para. 102 - 104). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention to add the illumination effects following a ringing tone to better inform a user of an incoming call since it is easier to see than hear a notification in a noisy environment.

6. Regarding **claim 4**, it is an apparatus claim corresponding to the method claim 1.

Therefore it is rejected for the same reasons as claim 1.

7. Regarding **claim 5**, Andrews, White and Gum teach all the limitations as in claim 4. Andrews further teaches said connector pins are arranged in line in an equal distance (Fig. 9 and 7).

8. Regarding **claim 6**, Andrews, White and Gum teach all the limitations as in claim 5. Although they fail to teach that the connector pins are arranged at the rear side of the cover part, changing the location from the front to the rear of the cover does not change the functionality of the cover. Therefore, it would have been obvious for one of ordinary skill in the art to place the pins at the rear as a designer's choice to best fit the rest components of the cover.

9. Regarding **claim 7**, Andrews, White and Gum teach all the limitations as in claim 6. Andrews teaches the number of connector pins is four. He does not teach the number to be three nor five. However, he teaches that there can be  $2^n$  combinations of models that can be supported depending on n number of pins. Therefore, it would have been obvious for one of ordinary skill in the art to choose 3 or 5 pins depending on the number of models the supplier would like to support (Col. 4, lines 17-20).

10. Regarding **claim 9**, Andrews, White and Gum teach all the limitations as in claim 5. Andrew teaches said value is a resistor value included in the cover type indicator (Col. 3, line 54 - Col. 4, line 10).



11. Regarding **claim 10**, Andrews, White and Gum teach all the limitations as in claim 6. White teaches the operation state is a frequency mode for directing an electrical representation of a ringing signal to the electric circuitry for providing an illumination effect synchronized with the ringing signal (para. 102 - 104).

12. Regarding **claim 13**, it is a cover that corresponds to the exchangeable cover as claimed in claim 4. Therefore it is rejected for the same reason as claim 4.

13. Regarding **claim 16**, Andrews, White and Gum teach all the method according to claim 1 further comprising, running a program stored in a memory located in the user exchangeable cover part located in a processor of the user exchangeable cover part (para. 66-72).

14. Regarding **claim 17**, it is an apparatus that corresponds to the exchangeable cover method claim 16. Therefore, it is rejected for the same reason as claim 16.

15. Regarding **claim 18**, it is a method that corresponds to the exchangeable cover method claim in 16. Therefore it is rejected for the same reason as claim 16.

16. Regarding **claim 19**, Andrews, White and Gum teach all the limitations of a wireless communication terminal according to claim 4, wherein the at least one of the

interface that connects the cover and the phone taught by White operates in an identification state is configured to operate in a frequency mode ([0097]), a pulse width modulation mode ([0102]) and a cover type indication-mode ([0008-0010]).

17. Claims **11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Andrews** (US Patent No. 5911121) in view of **White et al.** (US Publication No. 2005/0026643) further in view of **Gum** (US Patent No. 6,477,390) further in view of **Zhao** (Patent No. 2004/0204135)

18. Regarding **claims 11 and 14**, Andrews, White and Gum teach all the limitations as in claim 4 and 13 respectively. However, they fail to teach said set of tones and/or sound effects comprise music instrument digital interface tones. In an analogous art, **Zhao** teaches ring tones in the form of MIDI (6, 18, 25, 13 and 18). Therefore, it would have obvious for one of ordinary skill in art at the time of invention to add the MIDI tone as another plus feature into the fascia to make the product more marketable.

### ***Response to Arguments***

1. Applicant's arguments filed 1-11, 13 and 14-19 filed on 1/18/07 have been fully considered but they are not persuasive.

2. Applicant argues that the cited references do not teach that White's teaching teaches away from Andrews and they cannot be combined. The examiner respectfully disagrees, as addressed above, White's teaching clearly teaches that there are multiple possible interfaces to provide connection and communication between the cover and

Art Unit: 2617

the body of the mobile: contactless (inductive coupling) or contact (via ohmic coupling or pins). Contactless or contact is just a matter of design choice. Thus Andrew and White's combined teaching results in common ground of an interface that provides a connection between the cover and body of the phone. Therefore, White's teaching does not teaches away from Andrew's teaching.

3. Applicant argues that the cited references do not teach that the pin is bidirectional and bi-mode. The examiner disagrees. Since there is no exact definition of what is meant by "bi-directional" or "bimode", for examination purpose, the examiner will interpret "bi-directional" as a signal/energy flowing in and out of the cover and the "bi-mode" is interpreted as some operations that can be done two ways. As address above the pin is nothing more but an interface. In White's teaching, the interface clearly can send and receive from the cover to the body of the phone ([0047, 0062, 0067]) which reads on a general meaning of bi-directional. And the interface can operate asynchronous or synchronous mode and the fact that it can have at least two different functionalities (gaming, ringtones, messaging) are just two of the many possible interpretations to the broad limitation of "bi-mode".

#### ***Citation of Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. US Publication No. 2002/0030103 discloses a removable cover embedded with additional circuitry and having a pin.

5. US Pub No. 2003/0017848 having a smart cover with pin contact and embedded circuitry that hold programming instructions.

Art Unit: 2617

**Conclusion**

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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